

ComEd

An Exelon Company

powering lives



ComEd 2021 Summer Preparedness ICC Policy Session June 15, 2021

ComEd's Vision

Putting our clean energy to work

Using our clean energy advantage to power new clean transportation technologies and healthier air for our children.

Clean and affordable power when we need it

Combatting global climate change by achieving 100% clean and renewable energy.

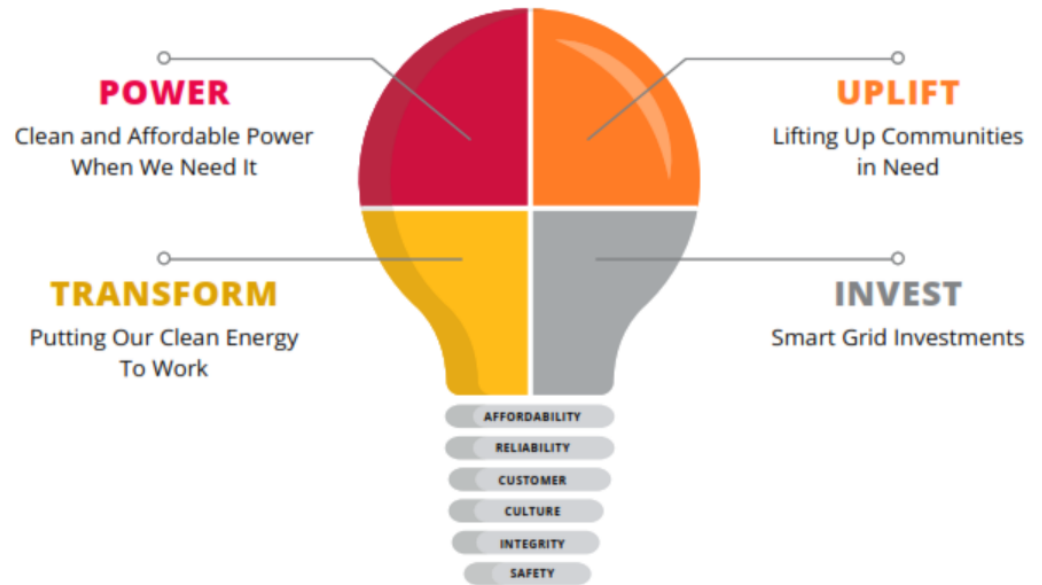
Lifting up communities in need

Help customers in need, grow quality jobs, and ensure all communities have access to clean energy and its benefits.

Smart grid investments

Increasing renewable energy hosting capacity while improving power quality and resilience (physical and cyber).

ComEd Strategy: What **WE** Care About



Assisting Our Customers

Help Amidst COVID-19

- Connected customers to more than \$75 million in customer relief and enhanced payment plans
- Suspended late payment fees
- Suspended service disconnections
- Offered reconnection with lower down payment
- Increased targeted customer outreach

Corporate Citizenship

- Employees volunteered over 11,000 hours and raised \$1.16 million for charities
- Contributed \$250,000 to Chicago Community Trust's COVID-19 Response Fund
- Donated \$2 million to Illinois COVID-19 Response Fund



From our customers:

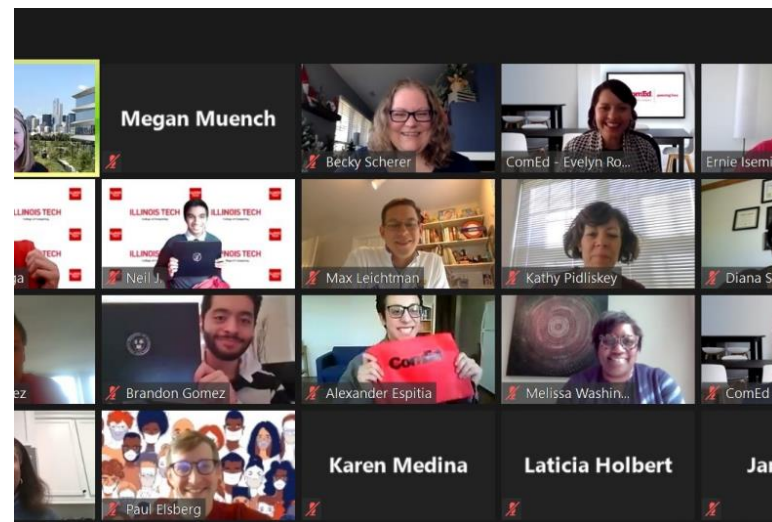
"@ComEd Can you imagine no electricity right now! ComEd workers are our heroes too! Thank you!"

"Thank you for your service. I can't even imagine how much worse it would become if we lost our power."

Supporting Our Communities During COVID-19 Pandemic

STEM Programs

- In 2020, 612 students were directly impacted by ComEd's STEM Programs
- Transitioned all programs to operate virtually
- Provided \$1M to fund full college scholarships
- ComEd Scholars Scholarship program partners with UIC and Illinois Tech to support students pursuing STEM degrees



Supplier Diversity

- Strong and growing partnerships with our diverse supply chain helped break all records in 2020 with a diverse spend of \$894 million – an all-time high of 42% of total supplier spend
- A year-over-year increase of \$156 million



Providing Clean and Affordable Energy Options

Distributed Energy Resources (DER)

- Since the passage of FEJA, the volume of interconnection requests has increased substantially
- Over 10,000 new solar interconnections completed in 2020 – the most in ComEd history
- In 2020, ComEd issued over \$21 million in rebates for new solar installed

Energy Efficiency (EE)

- In 2020, more than \$206 million in incentives were disbursed to over 358,000 customers
- Enabled customers to reduce their energy use saving more than \$180 million on their electric bills
- Received the ENERGY STAR Partner of the Year Award for Sustained Excellence for the 9th consecutive year
- Expanded business and employment opportunities for diverse and local businesses through the EE Service Provider Diverse Incubator Program



*

**ComEd customers have saved more than \$5.3 billion on energy bills and avoided 57 billion pounds of carbon through its energy efficiency programs.*

Beneficial Electrification: Supporting our Customers & Communities



EV resources for residential customers through an online EV Toolkit



Advice on EV economics and operational considerations and engagement with Chambers of Commerce



A partner and resource for public transit agency bus electrification and charging efforts



Supporting a pilot for emerging electric bus technology



Developing a Multi-Unit Dwelling & Curbside Residential Charging Toolkit and piloting first/last mile solutions



Testing a cyber-resilient extreme-fast charging solution



Collaborating with regional organizations and local governments to share best practices

Weathering Through The Impacts of Climate Change

Willis Tower Goes Dark Due to Massive Flooding in Chicago



August 10, 2020 Derecho Images

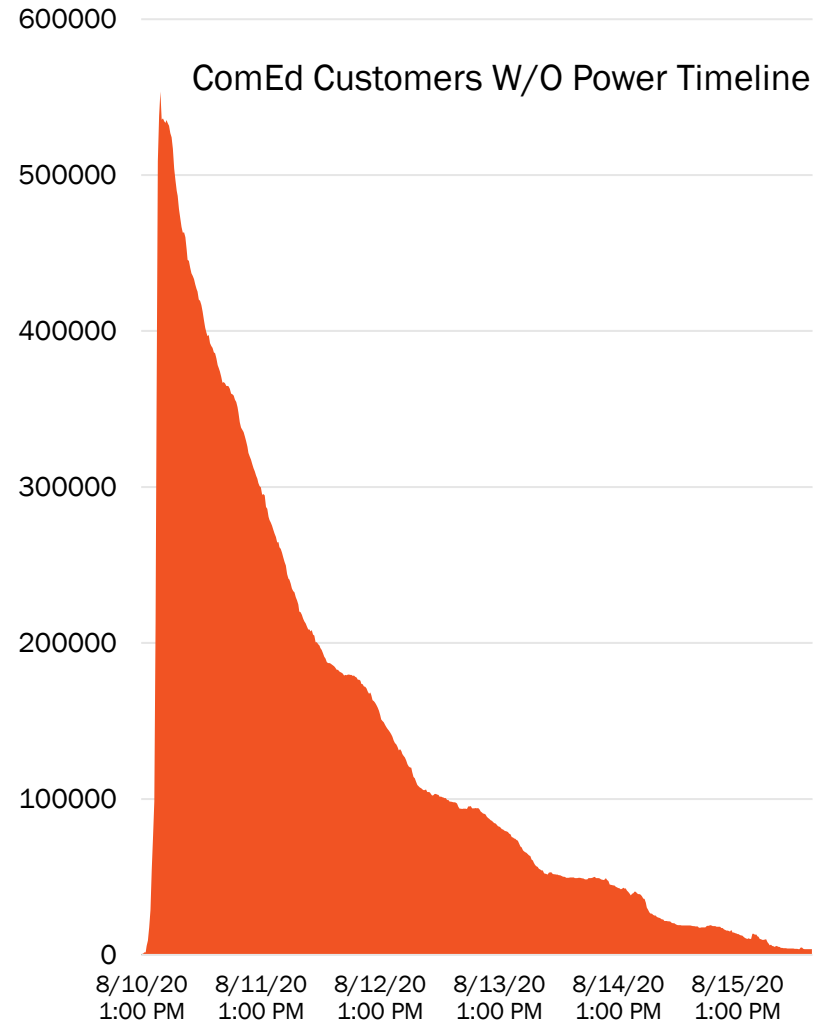


[CED_10901 ComEd Regulatory Video - 2020 Derecho V1 5-14-2021.mov \(vimeo.com\)](#)

August 10, 2020 Derecho Restoration

- ComEd's 6,100 employees, supported by contractors, Exelon Utility peer companies, and mutual assistance crews, executed the momentous restoration effort
- More than half a million customers were restored within 24 hours
- All customers restored within a week
- If not for smart grid investments made since 2012, this derecho would have caused nearly twice as many families and businesses to lose power, a two-week restoration and millions of additional dollars in costs

Following the derecho, we completed restorations in record time.



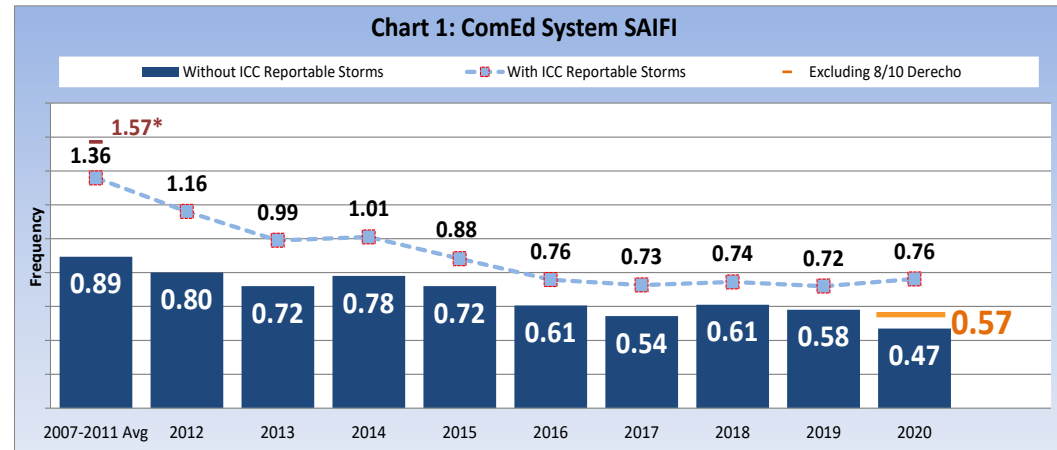
Reliability Performance

Delivering Value for Our Customers

ComEd's investments and operational improvements continue to deliver for customers. Overall reliability has improved by 81% (excluding the Derecho). Best in class of our benchmark with other large utilities in the U.S.

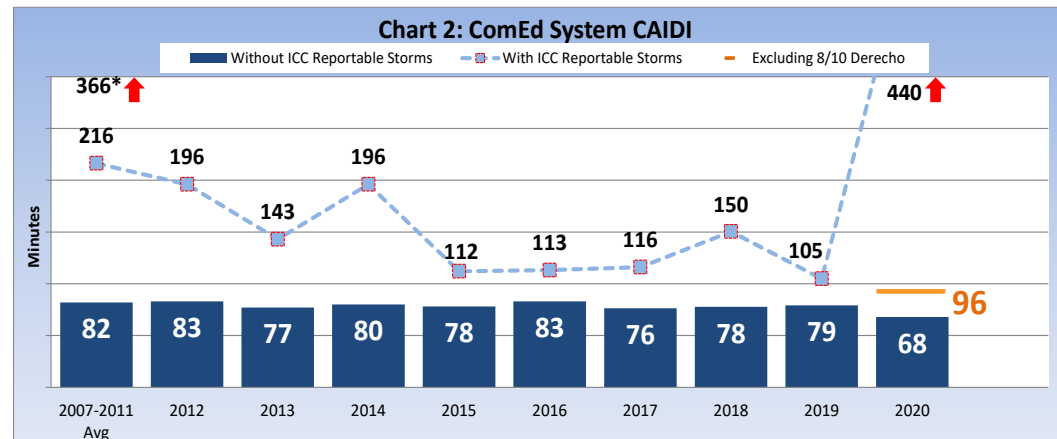
System Average Interruption Frequency Index ("SAIFI")

- 0.76 SAIFI was a 44% improvement compared to pre-EIMA data
- Excluding the derecho, SAIFI was best on record at 0.57
- Excluding reportable storms, SAIFI was 0.47, a 48% improvement



Customer Average Interruption Duration Index ("CAIDI")

- CAIDI of 440 minutes driven by derecho
- Excluding the derecho, CAIDI was best on record at 96 minutes
- Excluding reportable storms, CAIDI was best on record at 68 minutes



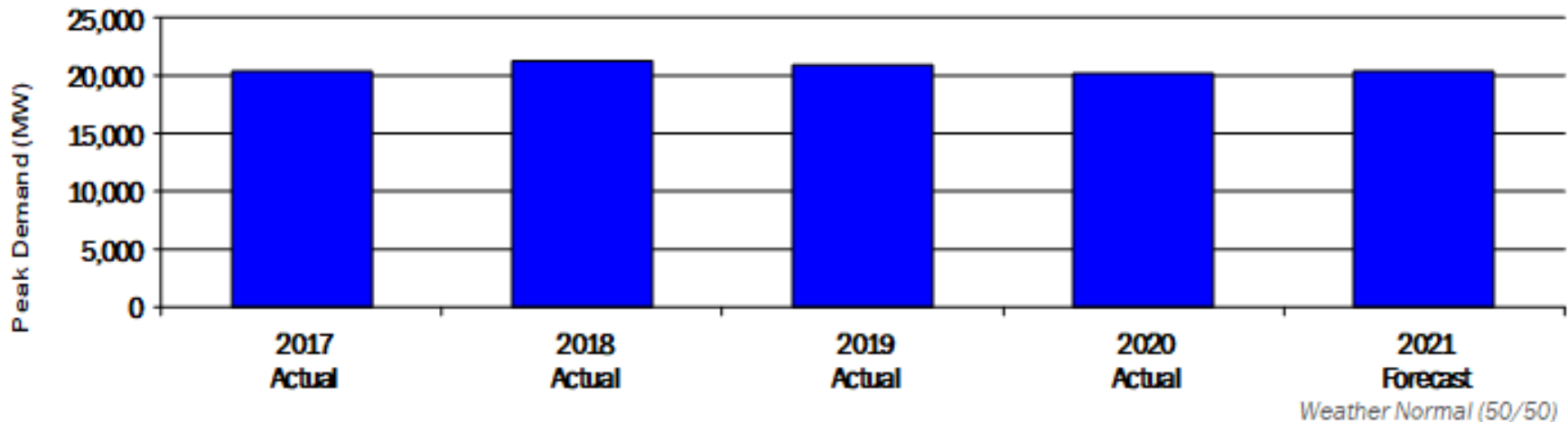
* 2011 CAIDI With ICC Reportable Storms

Prepared for Summer 2021

ComEd Well Positioned to Provide Reliable Service During the Summer

Peak Load Performance and Forecast

ComEd All-Time System Peak was 23,753 MW in 2011



2021 Load Performance & Summer Forecast

- PJM forecasted peak load for 2021 is 22,468 MW (90/10), 20,421 MW (50/50) for normal weather
- Above average temperatures for June, July and August (average of 80°)
- Above average precipitation (10.6 in.)

Prepared for Summer 2021

ComEd is Well Positioned to Provide Reliable Service During the Summer

Demand Response

- Demand Response potential peak hour reduction is 1,003 MW
- Peak Time Savings program has grown to 315,000 participants, providing 80 MW of demand response
- 67,000 customers enrolled in AC Cycling program, providing 67 MW of demand response



Assuring Preparedness

Storm Response Improvements

- Teams focus on continuous year over year improvement:
 - Mutual Assistance Innovation
 - Estimated Time of Restoration Strategy
 - Wire Watching
 - Damage Assessment/Patrolling
 - Vegetation Crew Support
 - Crew & Ticket Management
 - Weathering the Storm (Customer Communications)



Storm Readiness

- Spare equipment and flood mitigation plans in place
- Advanced Damage Prediction Model
- Use of drones
- Drills: Summer and Winter Readiness, Load Shed and Black Start, Joint Operations Center and Cyber Response
- Support of Mutual Assistance across the country



Emergency Preparedness Operational Drills

Joint Illinois Partnership

- Regular meetings with Ameren and MidAmerican

National Response Event (NRE) Functional Exercise

- Regional Mutual Assistance Groups from across the country

In 2020, ComEd facilitated and/or participated in 36 drills

2020/2021 Drills

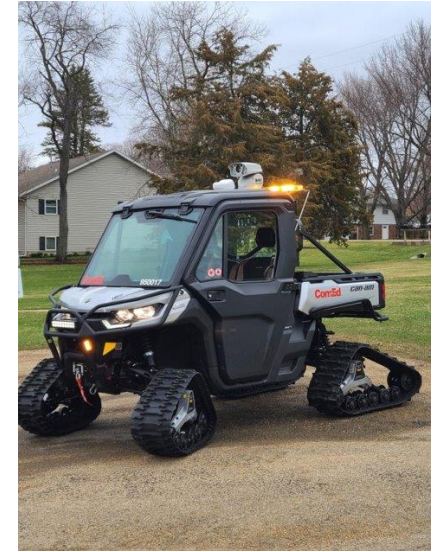
- Readiness drills included Joint Operations Center, Loadshed/Blackstart, and the 2020 ICC Cyber Resiliency Joint Exercise which engaged public and private sectors
- Conducted a Cyber Security drill focusing on how the Operations Control Center (OCC) identifies system abnormalities and takes proper response actions
- Completed Summer Readiness drills for our Emergency Response Organization on May 11th
- Over 20 operational readiness drills are scheduled for 2021



Core Programs to Build a More Resilient Grid

Maintaining and Improve our Assets

- A comprehensive Preventive Maintenance program
- Targeted system investments to improve performance including underground cable, overhead circuit, and wood pole replacements; substation modernization, flood mitigation and automation
- Future investments tied to both reliability and resiliency and the ability of the system to absorb stresses in all weather conditions and reduce the impact of increasingly significant events



Vegetation Management

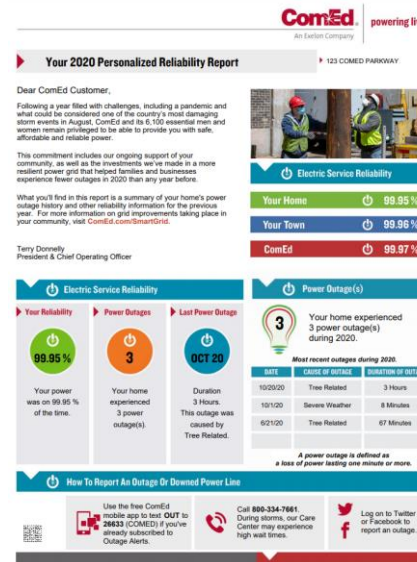
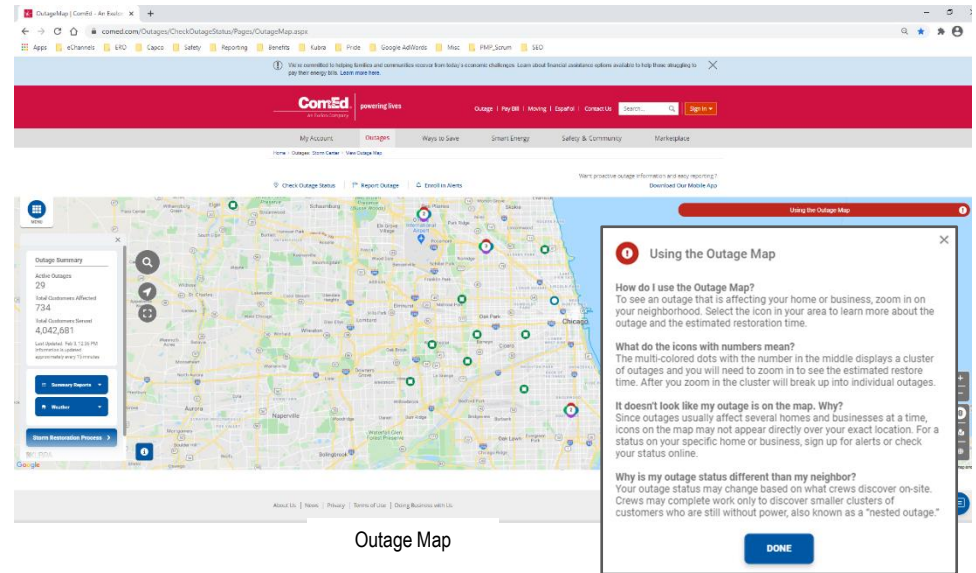
- In 2020, 1,219 circuits encompassing 8,765 miles of aerial lines, were trimmed as part of the Distribution Cycle Trim Program
- Enhanced Trimming and Mid-Cycle Trim programs reduce additional interruptions
- Removed 12,500 Ash Trees since 2017



Outreach to Our Customers

Communication tools focused on engagement

- ComEd has built a strong network of channels to communicate storm updates to customers
- Customers can check their outage status or report an outage online, the ComEd mobile app, by phone, through text message, and even on social media
- Over 1.3M customers receive outage alerts
- Personalized Reliability Reports
- Outage Map new layout
- Web/Text/Mobile
 - Additional Content on Transaction pages
 - Revamped Storm Center page

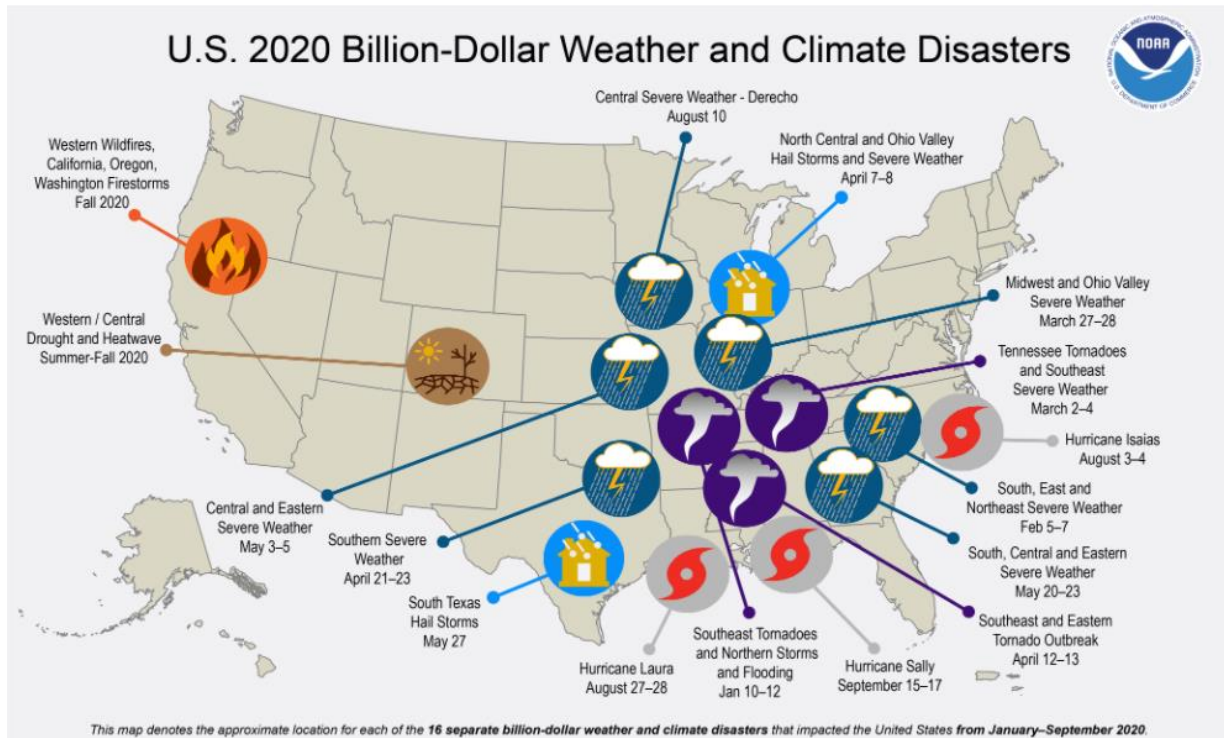


Personalized Reliability Report



Climate Change Impacts Increasing Pressure for Change

Since 1980, there have been many years with 10 or more-billion-dollar disaster events, including 1998, 2008, 2011, 2012, and from 2015 to 2020.



Source: NOAA National Centers for Environmental Information (NCEI)
U.S. Billion-Dollar Weather and Climate Disasters (2020).

Developing New Technologies Through Partnerships and Grants

ComEd through the support of the Department of Energy grants is...

- Demonstrating technologies that will enable ComEd to safely and securely integrate more clean energy resources.
 - *Including a project named SIMPLE, a sensor technology that will give us a greater observability, to see how DERs are impacting the grid.*
- Furthering technologies to provide higher levels of resiliency to the grid.
 - *Enabling cyber-secure and resilient extra fast charging that optimizes charging and reduces adverse grid impacts.*



Leveraging Smart Technologies, Data Analytics and an Advanced Communication Network to Deliver Value to Customers and Communities

We've expanded our portfolio of innovative technologies to support expansion and adaption of clean energy systems – like Distributed Energy Resource Management System (DERMS) – to help develop the next generation of technologies for the future.

We've also expanded our high-speed fiber backbone enabling these technologies as well as the increased observability needed for distributed energy resources.



DERS

(E.G. BESS, SOLAR, WIND,
EV, CHARGER)



SMART SENSORS



MODEL-BASED ANALYTICAL APPLICATIONS

(MMC, DERMS, DLSE, ETC.)



EV CHARGING STATIONS



DATA-DRIVEN ADVANCED APPLICATIONS

ComEd is Prepared

Leading the way to support and **UPLIFT** our customers during unprecedented times

Ready to provide **RELIABLE** electric service to customers during the summer months

Meeting the challenges of today and tomorrow through our **SMART GRID INVESTMENTS**

Ensuring ALL communities have access to clean and affordable **POWER**

TRANSFORMING our communities to improve air quality and the health of our communities

Questions?

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